NASA Procedural Requirements

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CHAPTER 3. MATERIALS INVENTORY CONTROL

3.1. Inventory Control Program

3.1.1. In keeping with the policy set forth in paragraph 1.5 of this NPR, NASA Centers shall establish and maintain a system to identify, document, and physically control all items held in inventories, i.e., Stores Stock, Program Stock, and Standby Stock.

3.1.2. Effective controls must be established to prevent the stockpiling of materials outside of the designated Center`s materials inventory control system.

3.1.3. If an item is considered hazardous material, the decision on whether or not to stock it should be based on health, potential environmental impact, and safety policies. The costs and complexities involved in any future excess and disposal processes should also be considered.

3.2. Classification of Inventory

NASA materials inventories shall be classified under one of the following three codes, which define the status of the materials while under inventory control. Using activities are permitted to keep on hand a limited amount of materials for day-to-day operations. In the case of Stores Stock type items, such quantities should normally not exceed a 60-day supply. SEMO are authorized to designate and limit total quantity dollar value of user activity Stores Stock type items to not exceed $20,000.

3.2.1. Stores Stock (Status Code 1). Material being held in inventory by the Center which is repetitively procured, stored, and issued on the basis of recurring demand.

3.2.2. Program Stock (Status Code 2). Material acquired by direct purchase or by issue from Stores Stock for a specific program or project. To be designated a Program Stock inventory, the extended dollar value of the items maintained therein shall exceed $75,000. A Program Stock inventory shall be under appropriate Center inventory and financial accounting controls. Items not meeting the $75,000 criteria may be maintained in a bench stock operation or under other locally determined controls.

3.2.3. Standby Stock (Status Code 3). Material held for emergencies for which there is no normal recurring demand but that must be immediately available to preclude delay, which might result in loss, damage, or destruction of Government property, danger to life or welfare of personnel, or substantial financial loss to the Government due to an interruption of operations. Standby Stock is not to be used as a repository for items declared excess from Status Codes 1 and 2, or from any other programs.

3.3. Inventory Type Accounts

3.3.1. Determination of the appropriate classification of material inventory items shall be based on the Federal Supply Classification Cataloging Handbook H2-1. Note that these types of accounts parallel those found in NASA Financial Management Manual 9254.6. New type accounts shall be approved by the Director, Logistics Management Division, and the Director, Financial Management Division, NASA Headquarters.

3.3.2. Pricing of Inventories:

3.3.2.1. Additions to inventory by purchase will be recorded in general ledger account 1200 at invoice price less trade discounts.

Cash discounts, when taken, are credited to the appropriate general ledger cost account 5X10. Transportation, handling, and storage costs should be included in inventory cost when included on the purchasing document and be readily and distinctly related to the item purchased.

3.3.2.2. Additions to inventory by transfer from other NASA Centers, other Federal Agencies, or from one status code to another will be recorded in general ledger account 1200 at the price actually paid for the material. If no payment is made for the material transferred, then the material will be recorded at the lower of the net book value of the transferor or the fair market value.

3.3.2.3. Items returned to the inventory, for credit or without credit, will be recorded at the lower of the original issue price or the current issue price. Credit shall be allowed only for returns which can be identified to the appropriation and accounting classification coding (i.e., organization, program, project, or functional category) of the activity to which the original issue was made. Credit shall not be allowed for any issue made prior to the beginning of the previous fiscal year.

3.3.2.4. When inventory is replenished through procurement, return, or transfer, a redetermination will be made of the average stock record unit price based on the weighted moving average. To do this, the value of the received item will be added to the value of the total quantity on hand, and the sum will be divided by the total of the received quantity plus the quantity on hand. The result is the new unit price.

3.4. Materials Inventory Control System

Each NASA Center shall establish and maintain a system to control materials inventory that includes the following:

3.4.1. A single system for managing Stores Stock inventories shall be established and maintained.

3.4.2. Program Stock and/or Standby Stock inventory records shall be maintained either at individual supply points under a decentralized system or at one control location for all of the supply points as a centralized or consolidated system. Only one set of records shall be maintained. All control records shall contain adequate and current descriptive data and shall accurately reflect the status of each item.

3.4.3. The control system shall provide for the identification through record coding or through use of detail support records of equipment items designated for support of a repair program when such a program is authorized by the Center. The system shall record issues by equipment serial number or similar control and shall identify the issue location.

3.4.4. Perpetual control shall be established for all inventories controlled by automatic data processing, all high demand items in a manual system, and for critical use or security items requiring special attention.

3.4.5. Low demand items managed under a manual system may be maintained under periodic control, except for critical use or security items requiring special attention.

3.4.6. Periodic control inventories shall use a stock record card as the control document. No issue data shall be posted to this record.

3.4.7. Perpetual inventory control systems shall use individual transaction entries for each action affecting an item. Each increase and decrease to stock levels shall be supported by an input or output document or comparable record, i.e., issue ticket, receiving report, or inventory adjustment voucher.

3.4.8. The perpetual inventory control record shall contain data showing the status of all actions affecting the item, i.e., issues, receipts, due ins, due outs, and adjustments.

3.5. Criteria for Classifying Stores Stock

The basic criteria for classifying items as Stores Stock are contained in paragraph 3.2.1

3.5.1. The candidate item for stockage must fall within one of the following categories:

a. Be physically adaptable to storage and issue.

b. Have anticipated demand patterns making reasonably accurate forecasts of requirements possible.

c. Have a shelf life sufficiently long enough to permit stockage without unnecessary loss.

3.5.2. Items having recurring demands but not meeting the minimum demand criteria may be carried in Stores Stock if at least one of the following applies:

a. Advance purchase and storage is necessary because of long procurement lead time.

b. An adequate industry distribution system does not exist that would ensure availability.

c. Market conditions are such that an adequate supply can only be ensured through stockage.

d. Volume purchases are necessary to secure timely delivery and advantageous price. However, the amount of the purchase should not exceed the economic retention limit for the item (see paragraph 4.6.4).

3.6. Criteria for Classifying Program Stock

3.6.1. Materials meeting the criteria of paragraph 3.2.2, held by any organizational element, shall be classified as Program Stock. Inventory controls initially shall be established at the direction of the SEMO and shall include an identification of the responsible program or project manager.

3.6.2. Items may be added to Program Stock inventory when authorized in writing by a program or project manager or designee. Any items added, whether by replenishment, transfer in or turn in, shall be identified to a specific program or project.

3.6.3. Equipment items, such as line replaceable units or components of major systems or subsystems, may be classified as Program Stock when approved for rotation through a repair program or for backup replacement components. Such items shall be distinctively tagged or marked to distinguish them from other equipment items managed under NPR 4200.1, "NASA Equipment Management Manual." Once such items are no longer identified to a repair program or as backup replacement stocks, normal controls under NPR 4200.1 shall apply.

3.7. Criteria for Classifying Standby Stock

Materials which are held to meet the requirements of paragraph 3.2.3 shall be classified as Standby Stock.
Items shall be added to Standby Stock only upon written justification by a division chief or equivalent.

3.8. Physical Inventory of Materials

Each stock classification of inventory shall be physically inventoried on a cyclic or sample basis pursuant to the procedures set forth in chapter 5 of this NPR.

3.9. Management of Shelf-Life Materials

Following the guidance in Federal Property Management Regulations, subchapter E, Subpart 101-27.2, "Management of Shelf Life Materials," NASA Centers shall develop and implement a program to minimize loss and ensure maximum use of shelf life items prior to their deterioration. A shelf life item is any item possessing deteriorative or changeable characteristics so that a storage period must be assigned to that item to assure upon issuance that the item shall perform satisfactorily. The SEMO shall establish a program to identify such items, establish the expiration dates and control their procurement, storage, issue, and disposal.

3.9.1. Types of Shelf-Life Items. Shelf-life items are classified as nonextendible (Type I) or extendible (Type II). A Type I item has a finite nonextendible storage life after which the item is considered to be unusable. Examples of Type I items are drugs and medicines with certain characteristics. A Type II item has an assigned shelf-life storage period that may be extended after completion of inspection, test, or restorative action. Examples of Type II items are paint, ink, tape, printing ribbon, and photographic film.

3.9.2. Shelf-Life Codes. All shelf-life items shall be identified in NASA supply inventory systems bya one-digit code (alpha or numeric) that is uniformly used by all Federal agencies. Alpha codes are for nonextendable items and numeric codes are for extendible items.

3.9.2.1. The code designators for items with shelf-life periods of up to 60 months can be found in the Federal Property Management Regulations subchapter E, subpart 101-27.205.

3.9.2.2. Office of Infrastructure and Administration is used to identify items not included in the shelf-life program.

3.9.2.3. Office of Security and Program Protection is used to identify critical end-use items, military-essential items, and medical items with a shelf life greater than 60 months. A critical end-use item is any item that is essential to the preservation of life in emergencies or any item essential to the performance of a major system. NASA Centers must establish the necessary controls for these items to prevent their issuance in an unserviceable condition.

3.9.2.4. Centers may also establish controls for items with a shelf life greater than 60 months that are not identified in paragraph (3). Such controls should be established only when they are necessary for effective management of the items.

3.9.3. Procurement of Shelf-Life Items. In determining requirements of shelf-life items, the length of storage (months of supply) and appropriate contracting techniques for the particular item involved, including specification requirements, industry practices, and storage and delivery procedures, shall be considered.

3.9.4. Identification and Shipping Requirements. Manufacturers, whenever practicable, shall be required to mark the unit or container with the month and year of manufacture or production and the batch number of all shelf-life items (60 months or less) procured from other than Government supply sources. Whenever practical, suppliers shall be required to ship or deliver material within a given number of months from the date of manufacture or production. These "age on delivery" requirements should not be imposed in such a manner as to unduly restrict competition at any trade level.

3.9.5. Packaging. To the extent feasible and economical, shelf-life materials shall be packaged in such a way to provide for minimum deterioration.

3.9.6. Controls and Inspection

3.9.6.1. Centers shall establish the necessary controls to identify shelf-life items on supply system records, and where applicable, on related storage locations, and locator records. Shelf-life items must be stored in a manner to ensure the oldest stock on hand is issued first**,** except where it is not feasible to do so**,** as in shipments to overseas activities.

3.9.6 2. Before the end of the designated shelf-life period, Type II items shall be inspected to determine whether the shelf-life period can be extended. This inspection criteria does not apply if the shelf-life item has a line item inventory value of $300 or less, or if the cost of inspection and testing is significant in relation to the value of the item. If material is found suitable for issuance on the date of inspection, the shelf-life period should be extended for a period equal to 50 percent of the original shelf-life period, and the next reinspection date should be established accordingly. Upon reinspection, the shelf life can be extended again up to 50 percent of the original shelf life as long as the material conforms to the established criteria.

3.9.6.3. Extension of shelf-life periods, based upon inspection of the material, shall be documented.

3.9.7. Marking. When the shelf-life period of Type II material containers of bulk stocks (except critical end-use items) is extended, only the exterior packaging need indicate the date of inspection and the date material is to be reinspected. Individual units of issue not classified as having a critical end-use application are not required to be annotated or labeled as long as the supply system maintains identifiable controls to preclude issuance of unserviceable material to a user. At the time of issue or shipment, the dates of inspection and reinspection must be affixed by a label or marked by other means on each unit of issue for Type II items having a critical end-use application.

3.9.8 Inventory Analysis

3.9.8.1. Centers must periodically conduct an inventory analysis of shelf-life items to determine whether quantities on hand shall be issued within the established shelf-life period so that arrangements can be made to ensure local use or redistribution to other Centers or agencies for use. Type I shelf-life items have a definite storage life. When these items cannot be used or redistributed, they shall be disposed of according to governing procedures.

3.9.8 2. The analysis of Type II items with a shelf life of less than 60 months shall be made as follows:

Shelf Life Period	Date of Analysis (Prior to item expiration)
48 to 60 months	12 to 16 months
36 to 48 months	8 to 12 months
18 to 36 months	6 to 8 months
12 to 18 months	4 to 6 months
6 to 12 months	3 to 4 months
Up to 6 months	** No analysis required

If the analysis of Type II items indicates that the quantity on hand shall be issued within the established shelf-life period, inspection is not required. If the analysis indicates that quantities on hand shall not be issued within the shelf-life period, the items must be inspected to determine if the shelf-life period can be extended. See subparagraph 3.9.6 for requirements.

3.9.9. Utilization and Distribution of Shelf-Life Items. When specific quantities of shelf-life items shall not be used within the shelf-life period, Centers should determine if they can be returned to the supplier. Items that cannot be returned to the supplier should be reported to the Property Disposal Officer (PDO) for disposition according to NPR 4300.1, Personal Property Disposal Manual. Items reported shall reflect the appropriate disposal or supply condition code and shall be clearly marked and documented as shelf life with the appropriate shelf-life code.

3.10. Precious Metals

Precious metals, in any shape or form, are susceptible to theft and other unauthorized use and, therefore, require extraordinary controls from point of receipt to point of use. Procedures for recovery and disposal of precious metals are in NPR 4300, NASA Personal Property Disposal Procedures and Requirements.

3.10.1 Definitions.

3.10.1.1. Precious metals are those listed below:

Silver Rhodium
Gold Ruthenium
Platinum Iridium
Palladium Osmium

3.10.1.2. Precious metal alloysare one or more precious metals combined with other materials to form an alloyed material or substance in any shape or form for fabrication, testing, or other research purposes.

3.10.1.3. Precious metal end items are these in any shape or form, consisting solely of one or more precious metals or precious metal alloys that have been shaped or fabricated for research or testing purposes or used as an entity.

3.10.2. Requirements.

3.10.2.1. NASA Centers shall establish controls to prevent the stockpiling of precious metals, including alloys and end items. Precious metals (pure, alloys, and end items) shall be acquired for a specific program, project, or other work activity only**,** the planning of which has been approved by the Center Director.

3.10.2.2. Requests for precious metals shall be processed through the Center SEMO for acquisition from Government sources or other NASA Centers, when available, prior to procurement from commercial sources. The precious metals listed in subparagraph

3.10.1.1 above are available to all Federal agencies through the Defense Precious Metals Recovery Program at substantially lower costs than commercial sources.

3.10.2.3. Precious metals shall be maintained under documented control and accounting from the time of receipt to final disposition. Such documentation and related control records should indicate the weight of precious metals to the nearest troy ounce.

3.10.2.4. Physical inventories of precious metals on hand (held for issue or disposition) shall be conducted at least annually by someone not having possession or custody of the metals. Adjustments shall be documented and processed, using the requirements in chapter 4, paragraph 4.7. The results of inventories shall be reported, in writing, to the Center SEMO within 30 days after the inventory.

3.10.2.5. All losses, including theft of precious metals in any form or end items, shall be promptly reported to the Center Security Officer. A survey report shall be initiated by the holder of the precious metal(s) in question and processed in accordance with NPR 4200,1, NASA Equipment Management Manual.

3.11. Returnable Containers

To ensure timely recovery of deposit and reduced expenditures for demurrage charges, Center SEMO's must establish and maintain current and detailed control records on returnable containers acquired by NASA directly from vendors, including containers used in providing support to on site contractors. To hold down demurrage costs, Centers should not use, to the extent possible, vendor-owned containers for long-term storage in the stock system of materials or products. Returnable containers should not be used for hazardous waste products.

3.11.1 General Requirements.

Prior to exercising the option to obtain Center requirements in either returnable or non-returnable containers, the following factors shall be considered:

3.11.1.1. Administrative details involved such as bookkeeping and accounting necessary to account for returnable container items while in NASA's possession.

3.11.1.2. The advantages of procuring items in low-value, nonreturnable containers when administrative costs incurred in handling returnable containers would result in increased cost to the Government.

3.11.1.3. Possible loss or damage to the containers while in the Government's possession, thereby either precluding any possible refund or reducing the monetary return when the container is returned to the vendor for refund of deposit.

3.11.1.4. The possibility of incurring demurrage charges that may equal the cost of the container itself.

3.11.1.5. Difficulties , to be encountered in ensuring that returnable containers are returned to the proper vendors for credit.

3.11.1.6. Handling and transportation costs to be incurred by NASA for the return of empty containers to the vendors.

3.11.1.7. Costs involved in ultimate disposal of nonreturnable c , on , tainers.

3.11.1.8. The feasibility of acquiring and utilizing Government-owned containers.

3.11.2 Procedures.

3.11.2.1. The NASA SEMO shall establish and maintain current, detailed control records.

3.11.2.2. Control records shall provide complete, accurate data of returnable container transactions from time of receipt until return to vendors.

3.11.2.3. Maintenance of detailed individual records is optional on any returnable container requiring a monetary deposit of $25 or less when demurrage charges are not involved.

3.11.2.4. Although detailed records are optional for low-value containers, Centers should return them to appropriate vendors to ensure recovery of deposits to the greatest extent possible.

3.11.2.5. Low-value containers, such as drums, may be recorded by lot.

3.11.2.6. Containers should be tagged or otherwise identified to facilitate identification of vendor-owned containers.

3.11.2.7. An adequate suspense system shall be maintained on returnable containers to ensure that they are recovered from using organizations and returned to vendors on a timely basis.

3.11.2.8. The Deputy Chief Financial Officer (Finance) shall be provided with necessary information when containers are either received from or returned to a vendor.

3.11.2.9. When materials in returnable containers are delivered to a using organization, the recipient shall be advised in writing that the container is returnable and must be returned to the vendor as soon as it becomes empty. The recipient also shall be advised when the free loan period expires, the amount of any deposit, and the actual demurrage charges after the free loan period.

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